PRINCIPAL GRAND - Subwoofer

Owner´s Manual

Thank you for your investment in our PRINCIPAL GRAND Subwoofer, we trust that you will enjoy the musical performance this product offers!

Please read this manual carefully and utilize the setup suggestions discussed. Ultimately, the most important part of the process is to listen to music and enjoy. Our suggestions are just that, suggestions.

If you find in your listening environment that a slightly different adjustment in setup results in a more enjoyable sonic picture, then follow it. All rooms are different and thus, we cannot give an accurate, single installation instruction guide that will cover all possible environ-ments. Please feel free to contact us or your local distributor with any setup related questions. It is our collective goal to ensure that you achieve the best possible performance out of this sophisticated product.

Thank you again and happy listening.

Sincerely,
Vienna Acoustics

IMPORTANT SAFETY INFORMATION

Explanation of symbols used in this manual and on the product:

This symbol is intended to alert the user to the presence of uninsulated dangerous voltages within the enclosure of sufficient magnitude to cause electric shock.

This symbol is intended to alert the user to the presence of important maintenance and servicing information in the instruction and service manuals.

WARNINGS

SHOCK HAZARD. DO NOT OPEN – NO USER SERVICEABLE PARTS.

TO AVOID THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE THE BASS DRIVER, THE REAR AMPLIFIER PANEL OR THE FILTER NET-WORK HOUSING ON THE BOTTOM OF THE SUBWOOFER.

NO USER SERVICEABLE PARTS INSIDE. REFER ALL SERVICE TO A QUALIFIED SER-VICE PROFESSIONAL.

FOR CONTINUED PROTECTION AGAINST THE RISK OF FIRE, REPLACE THE PROTECTION FUSE ONLY WITH

THE CORRECT TYPE AND RATING (1 ADDITIONAL FUSE FOR REPLACE-MENT IS INCLUDED).

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS DEVICE TO RAIN OR MOISTURE.

PLEASE READ THE FOLLOWING SAFETY INSTRUCTIONS VERY CAREFULLY BEFORE OPERATING THE PRINCIPAL GRAND SUBWOOFER

1. **Observe all warnings**: Observe all warnings on the subwoofer and in the operating instructions.

2. **Follow instructions**: Follow all operating, in-stallation and use instructions.

3. **Damage requiring service**: The product should be serviced by qualified personnel if:

   a. The product does not appear to operate normally or exhibits a marked change in operation.

   b. The power cord or plug has been damaged.

   c. Objects or liquid has fallen into the product.

   d. The product has been exposed to rain.

   e. The product has been dropped or the enclosure is damaged.

4. **Servicing**: Do not attempt to service the Principal Grand subwoofer beyond that described in the operating instructions. All other services should be referred to qualified service personnel.

5. **Indoor use**: Principal Grand is designed for indoor use only in a dry, domestic environment and for use within a temperature range of 10° – 40°C (50° – 105°F).

6. **Objects and liquid damage**: Do not let objects or liquids fall into the Principal Grand. Do not place a container with liquid on top of this product.

7. **Water and moisture**: Do not operate the Principal Grand near water, for example near a bath-tub, or in a wet basement nor near a swim-ming pool.

8. **Wall or ceiling mounting**: Principal Grand is neither suitable for mounting into the wall nor for mounting on the ceiling. If you choose a position on the wall or on a shelf, it will be necessary that the subwoofer be properly secured into position. Otherwise the subwoofer could fall due to the exceptional vibrations that can cause the unit to move or "walk."

9. **Ventilation**: Be sure to position the subwoofer so that its location or position does not interfere with its proper ventilation. The rear of the Principal Grand contains a metal panel that acts as a heat sink for the amplifier. It is particularly important that this area be clear to allow for proper air flow.

For this reason it is not recommended to build the Principal Grand into any cabinetry that does not contain special cooling capabilities.

10. **Heat**: Position the Principal Grand away from heat sources such as radiators, heaters, stoves or other appliances (including amplifiers) that produce heat.

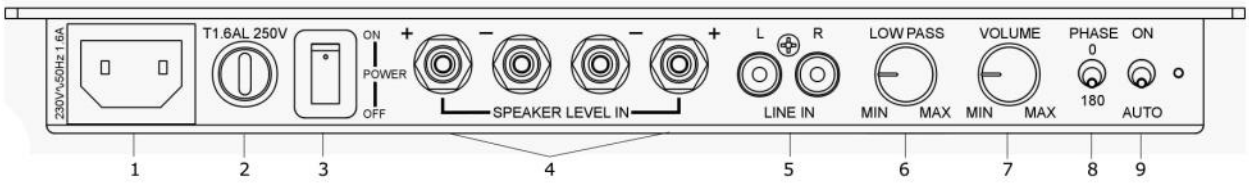
11. **Power sources**: Connect this subwoofer to an appropriate AC power outlet only of the voltage type marked on the Principal Grand (this will vary depending on the voltage in the country you purchased the unit in).

12. **Power cord protection**: Route the power cord so that it is not likely to be walked on or pinched by items placed on or near it paying particular attention to the plug end, power socket and the input of the subwoofer itself.

13. **Lightning storms**: Unplug the Principal Grand as well as the rest of your entire audio video system during electrical storms.

14. **Cleaning**: This product should only be cleaned in accordance with this manual.

15. **Retain the instruction manual**: Retain the safety and operating instructions for future reference.


230V~50Hz 1.6A
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1 – Power Cord Input

2 – Fuse Socket (use only the supplied fuse or one that is the same type and rating only!)

3 – Master Power Switch

4 – High-Level Inputs: This input derives the signal directly from the amplifiers output. This should be used when the Phono (RCA) – Plug inputs are not available.

5 – Phono (RCA) – Plug Inputs: This is the most common connection input that derives the signal either from the pre-amplifiers output or the subwoofer output of an audio video pro-cessor/receiver.

Attention: If only one Phono (RCA) – Plug connection is used for the subwoofer output of an audio/video processor/ receiver, it does not matter which, either left or right, input you use. If you have a need for additional gain, it may be necessary to use a Y-Adapter to use both Left and Right labeled inputs.

6 – Adjustable Crossover (Frequency) Control: The crossover point is determined by listening. Where this ultimately sets up best is determined by the in-room performance of your main loudspeakers unless the Principal Grand is being used exclusively for LFE. In such an application the crossover should be set to the highest point, thus relying exclusively on the base control available through your audio video processor/receiver.

7 – Volume Control: This adjusts the overall volume level of the Principal Grand relative to the main loudspeakers regard-less of whether the High-Level or the Line-Level inputs are used.

8 – Phase Switch: This critical switch allows for the timing of the subwoofer to be in phase (in time) with the main loudspeakers. The correct location is the position that produces the greatest output when combined with the loudspeakers. After finding this stronger or louder position, it may be necessary to lower the overall volume of the Principal Grand.

9 – On/Auto Switch: The On-Position places the Principal Grand in an always On- position while the Auto-Position automati-cally places the Principal Grand into standby when there is no signal for 15 minutes. While in the Auto-Position the Principal Grand with return to On once signal is detected.

Accessories

Power cord – 1 piece

Fuse – 1 piece (1 fuse already installed)

Gloves – 2 pieces (for protecting the delicate finish – please use)

Setup procedure for the Principal Grand subwoofer

1. In order to prevent scratches and finger-prints we have supplied with each Principal Grand a pair of our special cloth gloves. We highly recommend using these throughout the entire setup process.

2. Connect the Principal Grand subwoofer using either a pair of speaker connections, a pair of Phono (RCA) cables for stereo or a single LFE cable subwoofer cable. In each case we recommend that you discuss the best connection scheme with your retailer and purchase the appropriate cable choice.

3. Connect the Principal Grand to the AC power outlet.

4. Turn on the Master Power Switch.

Note: If the power LED does not immediately illuminate, please check that the On/Auto switch is in the Auto position. If this is the case, it will be necessary for the subwoofer to receive and audio signal before the LED will illuminate. For the setup procedure you may want to place this switch in the On-Position and then return it to the Auto-Position for normal operation.

5. For the ideal final setup as well as the most efficient use of setup time, please follow these simple dial-in instructions.

6. After the Principal Grand subwoofer is fully broken in, it may be necessary for you to make some final, minor adjustments to the crossover and overall gain settings.

Start with the controls in the following positions:

i. Crossover Control: middle position

ii. Volume: start in the middle position

iii. Phase: 0°

6. Listen: It is important that you listen to music while making the final proper adjustments to the Principal Grand. Start with a piece of music that has an abun-dance of consistent and rhythmic low bass. A recording with a plucked double-bass properly recorded should work quite well for this process.

a. Volume: Make necessary adjustments so that the volume of the subwoofer is similar to that of the main loudspeakers. It is possible that you will have to turn the Principal Grand´s gain control to near maximum. The choice of operating range of this special gain control we have used was determined by obtaining the best possible sound quality.

b. Phase: While listening to music, switch the Phase-Control between 0° and 180°. Select the position that offers the greatest overall bass output – this is the position that the Principal Grand subwoofer is working in time or in-phase with your main loudspeakers.

c. Crossover: After adjusting the Phase-Control, it will be necessary to determine the best crossover range for your in-room performance. Turn this control to the lowest setting available. It may be necessary to again adjust the overall volume. Most frequently at this point it will be necessary to raise the volume a position or two. Then adjust or raise the crossover setting until the overall bass performance begins to become overwhelming or "boomy." When this happens, lower the crossover setting until the "boominess" goes away.

e. Fine Adjustments: At this point you may find that a position or two higher on crossover will sound better with the overall volume a position or two lower. This will produce a slightly "warmer" bass contour while the opposite of having the volume a bit higher but a crossover setting that is slightly lower will produce a "faster" and more powerful lower bass output. This final fine adjustment process is of personal preference and thus listening to a couple different pieces of music should be used for this step.

Note: It is usually better to use a lower crossover setting with slightly higher overall volume settings in order obtain the optimum in room bass extension. Since all speakers have different performance in all rooms and with different associated other equipment, it is impossible to determine what the final setting for the crossover, gain or even phase will ultimately be. The only way to properly setup this device, or any other piece of a fine audio or audio/video equipment, is by listening.

Thank you and Happy Listening!

Vienna Acoustics

Specifications

Bass System	*Bass-Reflex Design – Bottom vented (requires 25mm/1" to 50mm/2" from vent to floor)*
Frequency Response	*20Hz – 100 Hz*
Driver Design	*Proprietary Pulp-Paper Carbon filled cone manufactured by ScanSpeak, designed by Vienna Acoustics*
Amplifier	*300 Watts*
	SMD Technology
Inputs	*(2) High-Level (~1,000Ω)*
	(2) Line-Level via Phono (RCA) – Plugs
Controls	*Power on/Standby (standby <1watt)*
	0° - 180° Phase switch
	Variable crossover control
	Variable gain control
Weight	*26kg / 58lbs*
Dimensions (w x h x d)	*385mm/15.25" x 495mm/19.5" x 385mm/15.25" (including spikes)*